

IN THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the above-referenced application.

1. (Previously Amended) A light emitting device comprising:

a substrate;

an n-type semiconductor layer;

an active layer for generating light, said active layer being in electrical contact with said n-type semiconducting layer;

a p-type semiconductor layer in electrical contact with said active layer; and

a p-electrode in electrical contact with said p-type semiconductor layer, said p-electrode comprising:

at least a layer of silver having a thickness sufficient to reflect greater than 50% of light incident thereon, wherein a portion of said generated light exits said device through said substrate after being reflected from said p-electrode;

a bonding layer in electrical contact with said layer of silver for making electrical connections to said layer of silver; and

a fixation layer overlying at least a portion of said layer of silver, wherein the fixation layer is conductive.

2. (Original) The light emitting device of Claim 1, wherein said n-type semiconductor layer and said p-type semiconductor layer comprise group III nitride semiconducting materials.

3. (Original) The light emitting device of Claim 1 wherein said silver layer is greater than or equal to 20 nm in thickness.

4. (Canceled).

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5. (Original) The light emitting device of Claim 1 wherein said fixation layer comprises a metal.
6. (Currently Amended) The light emitting device of Claim 5 wherein said fixation layer comprises a metal chosen from the group consisting of nickel, palladium, ~~gold, aluminum, chromium, titanium,~~ and platinum.
- 7-8. (Canceled).
9. (Original) The light emitting device of Claim 1 wherein said bonding layer comprises a metal chosen from the group consisting of gold, nickel, aluminum, and indium.
10. (Original) The light emitting device of Claim 1 wherein said bonding layer covers less than half of said layer of silver.
11. (Original) The light emitting device of Claim 1 wherein said bonding layer is a multi-layered structure.
12. (Previously Amended) The light emitting device of Claim 1 wherein said fixation layer is disposed between said bonding layer and said layer of silver, said fixation layer providing an electrical path between said bonding layer and said layer of silver, said fixation layer serving as a diffusion barrier layer for preventing constituents from said bonding layer from interdiffusing with said layer of silver.
13. (Previously Amended) The light emitting device of Claim 12 wherein said fixation layer comprises a metal.
14. (Previously Amended) The light emitting device of Claim 13 wherein said fixation layer comprises nickel.
15. (Previously Amended) The light emitting device of Claim 12 wherein said fixation layer encapsulates said layer of silver.
16. (Canceled).

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17. (Original) The light emitting device of Claim 1 further comprising:
an n-electrode comprising a layer of electrically conducting material in electrical contact with said n-type semiconductor layer; and
a package having first and second conductors thereon electrically connected to said p-electrode and said n-electrode, respectively.

18-35. (Canceled).

36. (Previously Amended) A light emitting device comprising:
a substrate;
an n-type semiconductor layer;
an active layer for generating light, said active layer being in electrical contact with said n-type semiconducting layer;
a p-type semiconductor layer in electrical contact with said active layer; and
a p-electrode in electrical contact with said p-type semiconductor layer, said p-electrode comprising:
at least a substantially transparent layer of silver;
a bonding layer in electrical contact with said layer of silver for making electrical connections to said layer of silver; and
a fixation layer overlying said layer of silver, wherein the fixation layer is conductive.

37. (Canceled).

38. (Currently Added) A light emitting device comprising:
a stack of semiconductor layers including a light emitting region;
a metal electrode contacting a surface of the stack; and
a diffusion barrier overlying the metal electrode for preventing migration of metal from the metal electrode.

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39. (Previously Added) The light emitting device of Claim 38 wherein the metal electrode comprises silver.

40. (Previously Added) The light emitting device of Claim 38 wherein the stack comprises a p-type III-nitride layer and the metal electrode is deposited on the p-type III-nitride layer.

41. (Previously Added) The light emitting device of Claim 38 wherein the barrier contacts a surface of the stack.

42. (Previously Amended) The light emitting device of Claim 38 wherein:
the barrier covers a first portion of the metal electrode;
a second portion of the metal electrode is not covered by the barrier; and
the first portion surrounds the second portion.

43. (Previously Added) The light emitting device of Claim 38 wherein the barrier covers an edge of the metal electrode.

44. (Previously Amended) The light emitting device of Claim 38 wherein the barrier covers an entire surface of the metal electrode.

45. (Previously Added) The light emitting device of Claim 38 wherein the barrier comprises a metal.

46. (Previously Added) The light emitting device of Claim 38 wherein the barrier comprises nickel.

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